RYABIN'KIY, Bronislav Yakovlevich; ADARYUKOV, G.I., inzh., retsenzent; BERLYAND, S.S., inzh., retsenzent; GERASIMENKO, V.A., inzh., retsenzent; GRUDSKIY, V.A., inzh., retsenzent; DASHEVSKIY, Ye.B., inzh., retsenzent; KARPMAN, Ya.I., inzh., retsenzent; KOROLEV, M.N., inzh., retsenzent; KORSAKOV, A.A., inzh., retsenzent; LISENKO, T.P., inzh., retsenzent; PEKILIS, I.B., inzh., retsenzent; REVYAKIN, A.A., inzh., retsenzent; ROMANOVICH, N.D., inzh., retsenzent; FILIPPOV, S.M., inzh., retsenzent; BRUSHTEYN, A.I., red.izd-va; DOBUZHINSKAYA, L.V., tekhn. red.

[Planning and the economics of metallurgical plants] Planirovanie i ekonomika metallurgicheskikh zavodov. Izd.3., perer. i dop. Moskva, Metallurgizdat, 1963. 754 p. (MIRA 16:4)
(Steel industry--Management)

RYABIN'KIY, Bronislav Yakovlevich; BERLYAND, S.S., inzh., retsenzent; GERASIMENKO, V.F., inzh., retsenzent; GRUDSKIY, Ye.B., inzh., retsenzent; DASHEVSKIY, Ya.I., inzh., retsenzent; DVORIN, S.S., inzh., retsenzent; KAMALOV, O.M., inzh., retsenzent; KARPMAN, M.A., inzh., retsenzent; KASHCHENKO, D.S., inzh., retsenzent; KOROLEV, M.N., inzh., retsenzent; KORSAKOV, A.A., inzh., retsenzent; LISENKO, T.P., inzh., retsenzent; PEKELIS, I.B., inzh., retsenzent; REVYAKIN, A.A., inzh., retsenzent; ROMANOVICH, N.D., inzh., retsenzent; PRIYMAK, I.A., prof., red.; AVRUTSKAYA, R.F., red.izd-va; ISLENT'YEVA, P.G., tekhn.red.

[Planning and economics of metallurgical plants] Planirovanie i ekonomika metallurgicheskikh zavodov. Izd.2., dop. i perer. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 736 p. (MIRA 13:2)

(Metallurgical plants)

GERASIMENKO, V.F.

RYBAL'CHIN, Valentin Stepanovich; POLYAKOV, Sergey Vasil'yevich; GERASIMENKO, Vasiliy Fedorovich; DOBRYNIN, A.A., dotsent, kandidat tekhnicheskikh nauk, inzhener-polkovnik; redaktor; DRUZHININSKIY, M.V., inzhener, mayor, redaktor. SOKOLOVA, G.S., tekhnicheskiy redaktor.

[A theory of piston airplane motors] Teoriia porshnevykh aviatsionnykh dvigatelei. Pod red. A.A.Dobrynina. Moskva, Voen.izd-vo Ministerstva obor. SSSR, 1955. 351 p. (MLRA 9:5)
(Airplanes--Motors)

SOV/169-59-6-6067

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 6, p 94 (USSR)

AUTHOR: Gerasimenko, V.I.

TITLE: On the Problem of the Causes of the Unitary Variation of the Electric Field of the Atmosphere

PERIODICAL: Uch. zap. Leningr. vyssh. inzh. morsk. uch-shche, 1958, No 10, pp 79 - 84

ABSTRACT: The unitary variation during the diurnal course of the atmosphere's electric field is connected with the distribution of dry land and sea along the longitude and with the changes of this distribution over the illuminated hemisphere during the earth's daily revolution. The determination of the dimensions of the parts of the earth's surface occupied by dry land and by sea on the illuminated hemisphere made it possible to determine the ratio of these areas for an arbitrary position of the earth and to explain the diurnal course of this ratio, being at a maximum at the time when the sun passes the 110th meridian w. long. (19.5 hours Greenwich time). A comparison between the curve obtained in this way and the curve

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SOV/169-59-6-6067

On the Problem of the Causes of the Unitary Variation of the Electric Field of the Atmosphere

for the diurnal course of the potential gradient over the oceans and the Arctic shows a time coincidence of the moments of maxima. On the basis of this coincidence, the conclusion is drawn that the unitary variation of the electric field and the thunderstorm activity averaged for the entire earth's surface, which shows an analogous diurnal course, are also caused by the aforementioned longitudinal distribution of dry land and sea. The problem of the physical causes of this connection is not discussed in detail.

P.N. Tverskoy

Card 2/2

GERASIMENKO, V.I.

ROZENTSVEYG, L.N.; GERASIMENKO, V.I.

Theory of multiple charge exchange in slow atomic collisions. (MLRA 10:7)
Uch.zap. KHGU 64 no.6:87-90 '55.
(Collision (Nuclear physics))

GERASIMENKO, V.I.

CARD 1 / 2 PA - 1488

SUBJECT USSR / PHYSICS
AUTHOR AZBEL', M.JA., GERASIMENKO, V.I., LIFSIC, I.M.
TITLE The Paramagnetic Resonance and the Polarization of Nuclei in Thick Layers of Metal.
PERIODICAL Žurn. eksp. i teor. fis., 31, fasc. 2, 357-359 (1956)
Issued: 10 / 1956 reviewed: 11 / 1956

It is shown that with the help of a high frequency magnetic field $H_1 \gg (8\pi\delta_{eff}/c^2 Z T_{fw})H_o$ it is possible to polarize nuclei of rather great depth: $\delta_{eff} \sim 10^{-2}$ up to 1 cm (up to which the electron progresses on the occasion of diffusion during the time T_{fw}). Here H_o and H_1 denote the field strengths of the constant and high frequency magnetic field, T_{fw} - the time of the free length of path of an electron with spin exchange (?), Z - the surface impedance of the metal. For the development of a consequent theory the following MAXWELL'S equations: curl $\vec{E}=-(1/c)\partial\vec{B}/\partial t$, curl $H_1=(4\pi/c)\vec{j}$, $B=\vec{H}_1+4\pi\vec{M}$ and a kinetic equation for the operator $\hat{f}$ of electron density are to be solved. (The operator $\hat{f}$ acts only upon the spins).

$$\frac{\partial \hat{f}}{\partial t} + \frac{\partial \hat{f}}{\partial \vec{r}}\vec{v} + \frac{\partial \hat{f}}{\partial \vec{p}}\left\{ e\vec{E} + \frac{e}{c}\left[\vec{v}\,\vec{H}\right]\right\} + \frac{i}{h}\left[\mu\vec{H}\hat{\vec{\sigma}}, \hat{f}\right] + \left(\frac{\partial \hat{f}}{\partial t}\right)_{col} + \left(\frac{\partial \hat{f}}{\partial t}\right)_{fw} = 0$$

Here $(\partial\hat{f}/\partial t)_{col}$ and $(\partial\hat{f}/\partial t)_{sp}$ denote the collision integral with and without spin exchange respectively, $\hat{\vec{\sigma}}$ - the spin operator, $\vec{v}$ and $\vec{p}$ - velocity and momentum of the electron. For these collision integrals explicit expressions are then given.

Žurn.eksp.i teor.fis,31,fasc.2,357-359(1956) CARD 2 / 2 PA - 1488

The boundary condition for the function $\hat{f}$ on the surface of the metal is: $\hat{f}\big|_{\vec{v}\vec{n}>0} = (1-q)\hat{f}^{0} + q\hat{f}\big|_{-\vec{v}\vec{n}}$. Here $\vec{n}$ denotes the interior normal on the surface, q - the reflection coefficient of the electrons on the surface; apparently it is practically true that $q \sim 0$. By decomposition of $\hat{f}$ according to the operators $\hat{I} = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$ and $\vec{\sigma}$ the above kinetic equation can be transformed into an equation system (which is mentioned here).- In the case of $T_{fw} = \infty, \omega = \Omega_0$ one of the equations of this system has a nontrivial solution at Ω_1 which depends only on ξ. Here $\Omega_0 = \mu H_0/\hbar$, $\Omega_1 = \mu H_1/\hbar$. Therefore this solution is near the eigenfunction and changes slowly with the depth $\xi = \vec{n}\vec{r}$. Next, the solutions of the equations for the case of resonance ($\omega = \Omega_0$) are given. From these solutions it is easy to determine the polarization P of the nucleus:
$P = I^{-1}\{(I+1/2)\mathrm{cth}(I+1/2)s - (1/2)\mathrm{cth}(s/2)\}$, $s = (|a|^2/(1+|a|^2))(\mu H_0/kT)e^{-\xi/\delta_{eff}}$.
Here I denotes the magnetic moment of the nucleus. - The slow damping of the magnetic moment $\vec{M}$ leads, according to MAXWELL'S equations, to the occurrence of small and also slowly changing parts of $\vec{E}$ and $\vec{H}_1$. Therefore it must be possible to observe a resonancelike passage of the electromagnetic wave through the film on the occasion of paramagnetic resonance, on which occasion the wave passing through must be circularly polarized. The passage coefficient may, in the case of resonance, be larger by many orders of magnitude than the passage coefficient in the case of lacking resonance. By the way, the film has a similar selective transparence.

INSTITUTION: Physical-Technical Institute of the Academy of Science in the Ukrainian SSR.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1869
AUTHOR GERASIMENKO,V.I., ROZENCVEJG,L.N.
TITLE The Two-Electron Change in Charge of α-Particles in Helium.
PERIODICAL Žurn.eksp.i teor.fis,31,fasc.4,684-687 (1956)
Issued: 1 / 1957

For the theoretical investigation of multiple processes of charge in charge the well-known approximation methods of the theory at atomic collisions may be employed for the computation of the cross section of one-electron processes. The present work investigates the limiting case of rapid collisions in which BORN'S approximation is applicable. A nucleus $2(Z_2,A_2)$ to which both electrons go over by the collision, incides upon a two-electron atom with the nucleus 1 (nuclear charge number Z_1, mass number A_1). The HAMILTONIAN of the system can be written down as follows after separation of the motion of the center of mass: $\hat{H} = -(1/2\mu_2)\Delta_Q + \hat{H}_2 - Z_1((1/r)+(1/r')) + Z_1Z_2/|\vec{r} - \vec{s}|$. Here $\vec{r}$, $\vec{r}'$, ($\vec{s}$, $\vec{s}'$) denote the radius vectors of the electrons with respect to the nucleus 1 (2), Q - the radius vector of the center of mass of the two-electron atom 1 with respect to the nucleus 2, μ_2 - the reduced mass, $\hat{H}_2$ - the HAMILTONIAN of the two-electron atom 2. The solution of the SCHROEDINGER equation is set up as follows: $\Psi = \sum_n F_n(Q)\,\chi_n^{(2)}(\vec{s}, \vec{s}')$. For $F_0(Q)$ an integral equation is given. The cross section of the capture of two electrons into the ground state of atom 2 is $d\sigma = (k_2/k_1)\,|f(\vartheta)|^2 d\Omega$. The hitherto

Žurn.eksp.i teor.fis,31,fasc.4,684-687 (1956) CARD 2 / 2 PA - 1869

mentioned formulae are rigorously valid. The following approximations are now assumed: 1.) BORN'S approximation, 2.) For the wave functions describing the ground states of atoms 1 and 2 the following approximation expressions are assumed: $\chi_o^{(1)} = (\alpha_1^3/\pi)\, e^{-\alpha_1(r+r')}$, $\chi_o^{(2)} = (\alpha_2^3/\pi)\, e^{-\alpha_2(s+s')}$. BORN'S approximation agrees well with the experiment also in the case of rather low velocities of up to v 1. Therefore a plane wave describes the relative motion of the atom and the ion sufficiently well in the case of not too high energies.
Similar conditions apply for the process $H^{++} + He \rightarrow He + He^{++}$ in the case of two-electron capture. The criterion of the applicability of BORN'S approximation is not quite clear in this case. The postulate $4/v \lesssim 1$ furnishes $E_{Lab} \gtrsim 1{,}5$ MeV, but if one is content with the inequation $v_o \lesssim v$ (where $v_o = \alpha$ denotes the velocity of inner-atomic electrons in the helium atom), a softer criterion must be applies to energy: $E_{Lab} \gtrsim 0{,}3$ MeV. An expression for the amplitude f (ϑ) of the two-fold change in charge on a α-particle in helium is then given and reduced to a form that is suitable for numerical computation. A formula is also written down for the change in charge cross sections.

INSTITUTION: Physical-Technical Institute of the Academy of Science in the USSR

GERASIMENKO, V.I.

USSR/Magnetism - Magnetic Resonance F-5

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 1199

Author : Azbel, M.Ya., Gerasimenko, V.I., Lifschitz, I.M.

Inst : Physical-Technical Institute, Academy of Sciences, Ukrainian SSR, Khar'kov.

Title : Paramagnetic Resonance and Polarization of Nuclei in Metals.

Orig Pub : Zh. eksperim. i teor. fiziki, 1957, 32, No 5, 1212-1225

Abstract : The theory of paramagnetic resonance in metals is developed on the basis of a simultaneous solution of the Maxwell equations and the kinetic equation for the density operator. The polarization that occurs thereby is determined. The polarization changes rather slowly with depth, diminishing exponentially at a depth of 10^{-4} -- 1 cm -- the average distance past by an electron between

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USSR/Magnetism - Magnetic Resonance F-5

Abs Jour : Ref Zhur Fizika, No 1, 1958, 1199

24(3) SOV/56-35-3-20/61

AUTHORS: Azbel', M. Ya., Gerasimenko, V. I., Lifshits, I. M.

TITLE: On the Theory of Paramagnetic Resonance in Metals (K teorii paramagnitnogo rezonansa v metallakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 3, pp 691-702 (USSR)

ABSTRACT: Paramagnetic resonance may occur if a metal is located in a steady magnetic field H_0 and in a variable electromagnetic field H_1, in which case the following must apply to the frequency of the variable field: $\omega = \Omega_0 \equiv 2\mu H_0/\hbar$. The absorption of the energy of the electromagnetic waves impinging upon the metal under the conditions of paramagnetic resonance has already been investigated by a number of experiments (e.g. Ref 2). The first theoretical investigation of this problem together with the calculation of electron diffusion from the surface layer was carried out by Dyson (Dayson) (Ref 3). The authors of the present paper developed a general theory of paramagnetic resonance in an earlier paper (Ref 1); it is based upon the

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solution of the equation for the electron density operator. The electrons are looked upon as a gas of noninteracting quasiparticles; for $\varepsilon(\vec{p})$ any dispersion law applies, and also the direction of H_0 and the intensity of H_1 may be chosen at random. In the present paper the authors, basing upon the results obtained by the preceding paper (Ref 1), investigate the dependence of surface impedance on the angle of inclination of the steady magnetic field to the metal surface, and further also the influence exercised by the dispersion law on impedance, and the case of sufficiently strong variable fields (resonance saturation). The following cases are dealt with: 1) In the interval $\Delta\varepsilon$ there are no open surfaces; 2) in $\Delta\varepsilon$ there are open and closed isoenergetic surfaces ($\varepsilon(\vec{p}) = \varepsilon$), and 3) in $\Delta\varepsilon$ there are only closed isoenergetic surfaces. Calculations are at first carried out for $\delta \ll \delta_{eff}$ (δ = skin depth, δ_{eff} = depth of electron diffusion); $\delta \gtrsim \delta_{eff}$ (range of normal skin effect, $j = \sigma E$) is dealt with in an appendix. It is found that in strong H_0-fields surface impedance depends essentially on the angle of inclination between the H_0-direction and the metal surface.

On the Theory of Paramagnetic Resonance in Metals SOV/56-35-3-20/61

There are 1 figure and 7 references, 5 of which are Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR (Physico-Technical Institute of the Academy of Sciences, Ukrainskaya SSR)

SUBMITTED: March 29, 1958

Card 3/3

24(3) SOV/56-35-5-22/56

AUTHORS: Andreyev, V. V., Gerasimenko, V. I.

TITLE: On the Theory of Paramagnetic Resonance and Paramagnetic Relaxation in Metals (K teorii paramagnitnogo rezonansa i paramagnitnoy relaksatsii v metallakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 5, pp 1209-1215 (USSR)

ABSTRACT: The recent times further development of the theory of paramagnetic resonance is based either upon the conception of the diffusion of electrons from the skin layer (Ref 1) or on using the kinetic equation for the electron density operator (Refs 2, 3). Overhauser (Overkhauzer) (Ref 4) and Elliott (Ref 5) devoted special attention to spin relaxation and investigated various kinds of spin interaction. Also the authors of the present paper investigated especially the spin relaxation mechanism, i.e. consideration of the influence exercised by spin-orbit coupling upon the interaction between electrons and lattice oscillations. For the purpose of setting up the kinetic equation the authors used the method of statistical operators for the quantum system (Ref 6). Already Gurzhi (Ref 7) used this

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On the Theory of Paramagnetic Resonance and Paramagnetic Relaxation in Metals

method for the purpose of investigating conductivity electrons without taking their spins into account. The authors set up a kinetic equation for conductivity electrons in metals, in which case the electron spin and spin-orbit interaction with the periodic field of the lattice are taken into account. The electrons are not in interaction. The kinetic equation obtained is suited for investigating paramagnetic resonance. The case of the homogeneous distribution of an alternating field in a metal is considered in detail. It is shown that for temperatures $kT \gg \mu H_0$ "longitudinal" and "transversal" spin relaxation times can be introduced, which are practically equal to each other. In conclusion, the authors thank Professor I. M. Lifshits for discussing the results obtained. There are 9 references, 4 of which are Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR (Physico-Technical Institute of the Academy of Sciences, Ukrainskaya SSR)

GERASIMENKO, V.I.

Spin-acoustic resonance in paramagnetic metals. Zhur. eksp. i teor. fiz. 40 no.2:585-589 F '61. (MIRA 14:7)

1. Fiziko-tekhnicheskiy institut AN Ukrainskoy SSR.
(Paramagnetic resonance and relaxation)

GERASIMENKO, V.I.

Two-electron charge exchange of protons in helium in fast collisions. Zhur.eksp.i teor.fiz. 41 no.4:1104-1106 O '61. (MIRA 14:10)

1. Fiziko-tekhnicheskiy institut AN Ukrainskoy SSR.
(Protons) (Electrons--Capture) (Helium)

AVERBAKH, Nikolay Vladimirovich; GAMOV, Anatoliy Grigor'yevich; MATSYUTO, A.F., retsenzent; GERASIMENKO, V.I., spets. red.; SERKO, G.S., red.; KHLOPOVA, L.K., tekhn. red.

[Radar hydrometeorology in navigation]Radiolokatsionnaia gidrometeorologiia v sudovozhdenii. Moskva, Izd-vo "Morskoi transport," 1962. 46 p. (MIRA 15:8)
(Radar in navigation) (Meteorology, Maritime)

GERASIMENKO, V.I.

Unusual airglow. Probl. Arkt. i Antarkt. no.13:129-130 '63.
(MIRA 16:9)

(Kheysa Island--Airglow)

ACCESSION NR: AP4012552 S/0056/64/046/001/0254/0261

AUTHORS: Oksyuk, Yu. D.; Gerasimenko, V. I.

TITLE: Dissociation of diatomic molecules in Beta decay

SOURCE: Zhurnal eksper. i teoret. fiz., v. 46, no. 1, 1964, 254-261

TOPIC TAGS: Beta decay, diatomic molecule, diatomic molecule dissociation, dissociation probability, vibrational level, rotational level, level excitation, recoil momentum, electron neutrino field, coupling constant interaction coupling constant

ABSTRACT: The probability for dissociation of a diatomic molecule during β decay is calculated under the assumption that the basic mechanism of the dissociation is the excitation of high vibrational and rotational levels because of the recoil momentum, while the electronic state of the molecule is unchanged. Calculations for the molecules $I^{127}I^{130*}$, $Ca^{40}I^{133*}$, and $Sn^{120}O^{19*}$ are presented by

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ACCESSION NR: AP4012552

way of examples. It is shown that the results can be used to determine in a manner simpler than usual the interaction constants for the coupling of the electron-neutrino field to nucleons. Orig. art. has: 3 figures and 14 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UkrSSR (Physico-technical Institute, AN UkrSSR)

SUBMITTED: 31May63 DATE ACQ: 26Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 002 OTHER: 004

Card 2/2

GERASIMENKO, M.V.; KHARKEVICH, S.S.

Physochlaina orientalis, a valuable alkaloid plant. Trudy Bot.sada AN URSR 3:50-55 '55. (MLRA 10:8)
(Kiev--Physochlaina) (Alkaloids)

MINDLIN, M.Z., GERASIMENKO, V.K.

Role of alkaloids in the vital activity of plants. Trudy Perm. farm. inst. no.1:121-130 '59. (MIRA 15:1)

1. Permskiy farmatsevticheskiy institut, kafedra farmakognozii.
(PLANTS, EFFECT OF ALKALOIDS ON)
(ALKALOIDS--PHYSIOLOGICAL EFFECT)

GERASIMENKO, V.N.

Conference on the problems of climatopathology in the clinical aspects of cardiovascular diseases. Vop.kur.,fizioter.i lech. fiz.kul't. 25 no.1:87-89 '60. (MIRA 13:5)
(CLIMATOLOGY, MEDICAL) (CARDIOVASCULAR SYSTEM--DISEASES)

MYAMLINA, G.A.; GERASIMENKO, V.N.; VORONTSEV, R.S. (Moskva)

Surgical approaches to the intervertebral nodes of the cervical and thoracic segments in dogs. Eksper. khir. 4 no.6:49-50 N-D '59. (MIRA 14:6)

(VERTEBRAE--SURGERY)

GERASIMENKO, V.S., ass.

Improving the use of vibration grinders in construction. [Trudy] RISI no.17:93-102 '60. (MIRA 15:6)
(Rostov Province--Binding materials) (Milling machinery)

5(3)

SOV/71-59-3-17/23

AUTHOR: Koshman, S.V. and Gerasimenko, V.V.

TITLE: Utilization of Diammonium-Phosphate as Phosphorous Nutrition in Processing Molasses to Alcohol (Primeneniye diammoniyfosfata v kachestve fosfornogo pitaniya pri pererabotke patoki na spirt)

PERIODICAL: Spirtovaya promyshlennost', 1959, Nr 3, pp 39-41 (USSR)

ABSTRACT: The Dublyanskiy spirtovyy zavod (Dublyanskiy Alcohol Plant) started using in April 1958, as phosphorous nutrition for yeast, technical diammonium phosphate, which is inaggressive in regard to iron and easily dissoluble in water. In view of the fact that laboratory tests were performed with plant yeast, the tests permitted only to ascertain that the diammonium phosphate was non-toxic for yeast and did not lower its fermenting activity. The initial norm was set at 99 kg of diammonium phosphate per 1,000 dkl, which is equivalent of 330 kg of superphosphate per 1,000 dkl with respect to P_2O_5 content. In May the norm was set at 20 kg of diammonium phosphate per 1,000 dkl (approaching the norm of phosphoric acid which is 13.5 kg per 1,000 dkl). Since the end of May the norm was reduced to 10.2 kg of diam-

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Utilization of Diammonium-Phosphate as Phosphorous Nutrition in Processing Molasses to Alcohol

monium-phosphate. Results shown in Table 2 prove that the employment of diammonium-phosphate did not interfere unfavorably with the technological process. The introduction of diammonium-phosphate containing more than 20% of nitrogen in a form easily absorbed by yeast, permits to stabilize nutrition of yeast and to contribute toward a rhythmic development of the technological process. Table 3 shows that the quality of the alcohol has not changed as a result of utilization of diammonium-phosphate instead of superphosphate.
There are: 1 block-diagram and 3 tables.

ISAYEV, Ye.D.; GERASIMENKO, V.V.; SOBIN, P.I.

Press for squeezing out oil from oil-rich deposits. Masl.-zhir. prom. 27 no.3:43-44 Mr '61. (MIRA 14:3)

1. Nikolayevskiy maslozavod.
(Krasnodar Territory—Oil industries—Equipment and supplies)

GERASIMENKO, V.Ye., inzh.; ZELONDZHEV, O.M., inzh.; PSHENICHER, V.L., inzh.

New diagram of the block of the TP-100 boiler unit. Energ. stroi. no.34: 20-26 '63. (MIRA 17:1)

1. Proyektnaya kontora tresta "Teploenergomontazh".

OVECHKIN, Ye.K.; GERASIMENKO, Ye.I.; GUSAKOVA, L.A.; Prinimali uchastiye: SHESTAKOVA, L.A.; KOTILEVSKIY, V.I.; VOROPAY, S.A.

Development of the technology of production of highly dispersed calcium carbonate. [Trudy] NIOKHIM 15:19-63 '63.
(MIRA 18:2)

OVECHKIN, Ye.K.; DROZIN, N.N.; KUTSYNA, M.I.; SHESTAKOVA, L.A.; GERASIMENKO, Ye.I.; Prinimali uchastiye: YEREMEYEV, V.S.; KATERINCHENKO, V.A.; VORONINA, L.A.

Scale formation in distillation columns of the soda manufacture. Zhur.prikl.khim. 34 no.9:1987-1995 S '61. (MIRA 14:9)
(Distillation apparatus)

GERASIMENKO, Ye.M.

Efficacy of levomycin treatment of typhoid and paratyphoid fever; data from the First Tashkent City Hospital for Infectious Diseases. Nauch.trudy uch.i prak.vrach. no.2:83-88 '61. (MIRA 15:8)

1. Iz I Tashkentskoy gorodskoy klinicheskoy infektsionnoy bol'nitsy (direktor bol'nitsy - prof. I.K.Musabayev).
(TYPHOID FIEVER) (PARATYPHOID FEVER) (CHLOROMYCETIN)

GERASIMENKO, Ye. V.

"Times and Methods of Cultivating the Layers of Perennial Grasses Under Winter and Spring Wheat Under Conditions in the Southern Part of the Forest Area of the Ukrainian SSR." Cand Agr Sci, Ukrainian Order of Labor Red Banner Agricultural Academy, Min Higher Education USSR, Kiev, 1955. (KL, No 16, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

MIKHALOVSKIY, A.G., doktor sel'skokhozyaystvennykh nauk, prof.;
GERASIMENKO, Ye.V., kand.sel'skokhozyaystvennykh nauk; KALIBERDA, V.M., assistent

Effect of various tillage practices on field crop yeilds. Nauch. trudy UASHN 10:17-23 '60. (MIRA 14:3)
(Tillage) (Field crops)

AUTHORS: Oksengendler, G. M. (Deceased), Gerasimenko, Yu. Ye. 79-12-10/43

TITLE: Investigations in the Field of Thioindigoid Dyes (Issledovaniya v oblasti tioindigoidnykh krasiteley).
I. The Synthesis of Thiophenols and S-Arylthioglycolic Acids (I. Sintez tiofenolov i s-ariltioglikolevykh kislot).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 12, pp. 3214-3217 (USSR).

ABSTRACT: Following an English patent (reference 1) the authors succeeded in working out a convenient method for the synthesis of thiophenols and the corresponding s-arylthioglycolic acids. On this occasion it was stated that in the reaction of aryldiazoniumchlorides with sodium polysulfide, except of diarypolysulfides as intermediate products, diarylsulfides form with a yield of 5-10%. It is of interest that on the occasion of the interaction of just the same diazo-compounds with sodium disulfide, mainly diarylsulfides occur. In the present work the conversion of the diarylpolysulfides and thiophenoles under the influence of aqueous alkali was investigated. In the case of a diaryltetrasulfide the reaction would be demonstrated by the following formula: $4\ Ar_2S_4 + 18\ NaOH = 8\ ArSNa + 2\ Na_2S + 3Na_2S_2O_3 + 9H_2O$.

Card 1/2 If necessary, the thiophenols with acidification might be separated

Investigations in the Field of Thioindigoid Dyes. 79-12-10/43
I. The Synthesis of Thiophenols and S-Arylthioglycolic Acids.

carefully from the alkaline solutions, which, however, mostly did not succeed. By means of condensation with monochloroacetic acid the corresponding s-arylthioglycolic acids converted according to the scheme:

$$Ar\ S\ Na \xrightarrow{ClCH_2COONa} Ar\ S\ CH_2COONa \xrightarrow{H\text{-}Cl} Ar\ S\ CH_2COOH$$

The yield of the thiophenols and s-arylthioglycolic acids amounted to 80% of the theoretical yield. In this way 12-s-arylthioglycolic acids were synthesized, 6 of which had been unknown.
There are 1 table, and 7 references.

ASSOCIATION. The Rubezhnoye Branch of the Scientific Research Institute for Organic Semi-Products and Dyes (Rubezhanskiy filial nauchno - issledovatel'skogo instituta organicheskikh poluproduktov i krasiteley).

SUBMITTED. November 9, 1956.

AVAILABLE. Library of Congress.

Card 2/2 1. Thiophenols - Synthesis 2. s-Arylthioglycolic acids - Synthesis

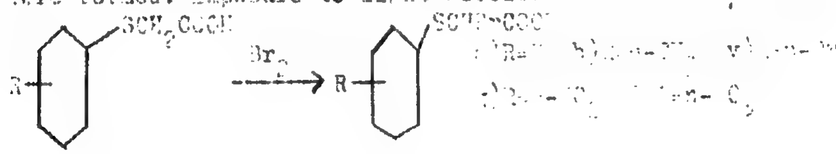
(9)

AUTHORS: [illegible], [illegible], SOV/79-[illegible]
Gerasimenko, Yu. Ye.

TITLE: Investigations in the Field of Thioindigoid Dyes
([illegible])
II. Bromination of the S-Arylthioglycolic Acids
(II. Bromirovaniye S-ariltioglikolevykh kislot)

PERIODICAL: Zhurnal obshchey khimii, 195[illegible], Vol 2[illegible], [illegible]

ABSTRACT: In the bromination of the S-arylthioglycolic acids the authors found, according to the reaction conditions, that bromine either enters the nucleus or the methylene group. By the action of bromine on these acids (I) in carbon tetrachloride or benzene trichloride the glycolic acids (II) were formed. Exposure to light accelerates the reaction (I):



(I) (II)

Card 1/3

Investigations in the Field of Thioindigoid Dyes [illegible]
II. Bromination of the S-Arylthioglycolic Acids

In the case of (Ib), however, the methyl group is consumed. The presence of bromine in the nucleus, in particular of the nitro group, decreases abruptly the reaction rate. In the α-halogenation of the thio ethers it must be assumed that the bromination takes place on the radical and also [illegible] (scheme 2). The α-bromo-S-arylthioglycolic acids [illegible] even under the influence of atmospheric moisture, with the characteristic odor of thiophene occurring. Under the influence exercised by H_2O and aqueous alkali liquor a quantitive cleavage takes place. By boiling with strong hydrochloric acid the bis-(arylthio)-acetic acids (III) were obtained from (II):

[illegible] $\xrightarrow{+H_2O}$ ArSH + CHOCOOH $\longrightarrow$ $(ArS)_2CHCOOH$ (III)

The hydrolysis of the α-halogenated thio ethers ([illegible]) proceeds [illegible] scheme. The formation of thiophenol [illegible] glycolic acid is confirmed by the occurrence of the thiophenol odor as well as by reference [illegible]. By bromination

Investigations in the field of Dithiodiglycolic Acid Dyes [illegible]
II. Bromination of the S-Aryl Thioglycolic Acids

of the S-arylthioglycolic acids in light exposure the α-bromo-S-arylthioglycolic acids hitherto unknown were thus synthesized. By their hydrolysis the bis-(arylthio)-acetic acids are formed. By bromination of the S-arylthioglycolic acids in the presence of catalysts several S-arylthioglycolic acids brominated in the nucleus were obtained and their structure was determined. There are 7 tables and 11 references, 1 of which are Soviet.

ASSOCIATION: Rubezhanskiy filial Nauchno - issledovatel'skogo institute organicheskikh poluproduktov i krasiteley imeni F. Ya. Voroshilova (Rubezhansk Branch of the Scientific Research Institute of Organic Semi-Products and Dyes imeni F. Ye. Voroshilov)

SUBMITTED: January 16, 1956

Card 3/3

5.3610

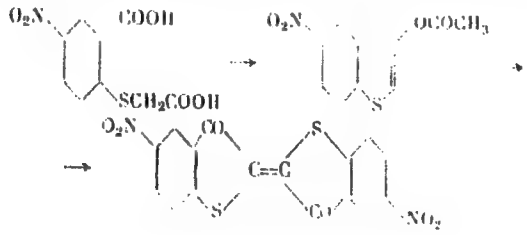
AUTHORS: Dokunikhin, N. S., Gerasimenko, Yu. Ye.

TITLE: Investigation in the Field of Thioindigoid Dyes. III. Dinitro-Substituted Thioindigo

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 2, pp 635-638 (USSR)

ABSTRACT: The influence of electrophilic substituents on the color of thioindigo was studied in 3 dyes with nitro groups in 5,5'-, 6,6'-, and 7,7'-position.

5,5'-dinitrothioindigo was obtained in the reaction



Card 1/5

Investigation in the Field of Thioindigoid
Dyes. III. Dinitro-Substituted Thioindi-

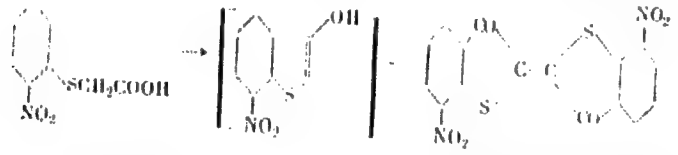
SOV/79-30-2-

The starting compound S-(2-carboxy-4-nitrophenyl)-thioglycolic acid was obtained in the reaction of thioglycolic acid and 2-chloro-5-nitrobenzoic acid. The starting compound was cyclized by boiling in acetic anhydride in the presence of anhydrous sodium acetate; the reaction gave 5-nitro-3-acetoxythionaphthene. The latter was oxidized by boiling with ferric chloride in 10% HCl and gave 5,5'-dinitrothioindigo (orange-colored crystals, from nitrobenzene; yield 32%; 370-375° C, decomp). 6,6'-substituted derivative was synthesized similarly. Diazotization of 4-nitroanthranilic acid, treatment with potassium ethyl xanthate, and decomposition of the ethyl xanthate in the presence of chloroacetic acid gave S-(2-carboxy-5-nitrophenyl-thioglycolic acid. The latter on boiling with anhydrous sodium acetate and acetic anhydride gave

Investigation in the Field of Thioindigoid Dyes. III. Dinitro-Substituted Thioindigo

SOV/79-30-2-59/78

gave 6-nitro-3-acetoxythionaphthene, which on boiling with ferric chloride in 10% HCl gave 6,6'-dinitrothioindigo (purple crystals; from nitrobenzene; yield 76%; 385° C decomp). S-(o-nitrophenyl)-thioglycolic acid was added slowly to ice-cold chlorosulfinic acid, and left standing for 2 hr. Subsequently, 2 drops of bromine were added, the mixture left standing for another 2 hr, and decomposed with ice. The reaction gave 7,7'-dinitrothioindigo (brown crystals, from nitrobenzene; yield 90.5%; did not decompose at 400° C).



Card 3/5

Investigation in the Field of Thioindigoid
Dyes. III. Dinitro-Substituted Thioindigo

The absorption maxima determined in benzene with type SF-2M recording spectrophotometer gave the following values of λ_{max} (arranged in ascending order):

5,5'-dinitrothioindigo	513 mμ
7,7'-dinitrothioindigo	538 mμ
Thioindigo	545 mμ
6,6'-dinitrothioindigo	567 mμ

It follows that the electrophilic nitro group in ortho- and para-positions with respect to the sulfone atom (5,5'- and 7,7'-positions) causes a hypsochromic shift of the absorption maxima, and the meta-position (6,6'-position) a slight bathochromic shift. This is to be the effect presumed by other authors [illegible] as alkoxy, amino, methyl, and other groups [illegible]

Card 1/2

the opposite effects, i e , a bathochromic shift when in ortho- or para- position, and hypsochromic shift when in meta-position. There are 7 references, 1 U.S., 3 German, and 3 Soviet. The U.S. reference is: W. R. Brode, G. M. Wyman, J. Research Natl. Bur. Standards, 47, 170 (1951).

ASSOCIATION: K. Ye. Voroshilov Scientific Research Institute of Organic Intermediates and Dyes (Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley imeni K. Ye. Voroshilova)

SUBMITTED: February 12, 1959

S/079/60/030/04/39/080
B001/B016

AUTHORS: Dokunikhin, N. S., Gerasimenko, Yu. Ye.

TITLE: Investigations in the Field of Thioindigo Dyes.[6]
IV. Mononitro-substituted Thioindigo Derivatives

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 4, pp. 1231-1233

TEXT: In the synthesis of monochloro-, monomethyl-, monoethoxy thioindigo described in publications (Ref. 1), the color of the monosubstituted thioindigo dyes is not compared with that of the corresponding disubstituted and nonsubstituted thioindigo. The authors of the present paper synthesized 5- and 6-mononitro-indigo and investigated the absorption spectra of their solutions in benzene. The dyes were formed by condensation of the corresponding nitro-acetoxy-thionaphthenes (Ref. 2) with thionaphthene-quinone-2-(p-dimethyl-amino)-anil in acetic acid, in the presence of piperidine, as well as by condensation of 3-hydroxy-thionaphthene with nitro-thionaphthene-quinone-2-(p-dimethyl-amino)-anils (Scheme 1). Nitro-thionaphthene-quinone-2-(p-dimethyl-amino)-anils are formed by reaction of nitro-acetoxy-thionaphthenes with p-nitroso-

Card 1/2

dimethyl aniline in soda solution (Scheme 2). When entering into reaction with thionaphthene-quinone-2-(p-dimethyl-amino)-anil and p-nitroso-dimethyl aniline, the nitro-acetoxy-thionaphthenes exhibit the same reactivity as 3-hydroxy-thionaphthene and its derivatives. The absorption maxima of the mononitro-substituted thioindigo compounds dissolved in benzene are given in the table. Contrary to the unsymmetrical cyanine dyes, the mononitro-substituted thioindigo dyes show a more intense color than it would be the case if the nitro group in mononitro-indigo exerted the same effect on the color as each nitro group in the corresponding dinitro-substituted dye. There are 4 references, 2 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley imeni K. Ye. Voroshilova, Moskva (Scientific Research Institute of Organic Semiproducts and Dyes imeni K. Ye. Voroshilov, Moscow)

SUBMITTED: April 13, 1959

DOKUNIKHIN, N.S.; GERASIMENKO, Yu.Ye.

Thioindigo dyes. Part 5: Effect of methyl groups and of the halogen on the color of thioindigo. Zhur.ob.khim. 30 no.6:1987-1989 Je '60. (MIRA 13:6)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley imeni K. Ye. Voroshilova, Moskva.
(Thioindigo)

GERASIMENKO, Yu. Ye.

Cand Chem Sci - (diss) "Studies in the field of thio-indigo dyes." Moscow, 1961. 14 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Order of Technological Chemistry Inst imeni D. I. Mendeleyev); 150 copies; price not given; (KL, 10-61 sup, 207)

DOKUNIKHIN, N.S.; GERASIMENKO, Yu.Ye.

Thioindigoid dyes. Part 6: Ethoxy and ethoxynitro substituted derivatives of thioindigo. Zhur. ob. khim. 31 no.1:219-223 Ja '61. (MIRA 14:1)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley imeni K.Ye. Voroshilova.
(Thioindigo)

OKSENGENDLER, G.M. [deceased]; GERASIMENKO, Yu.Ye.; Prinimali uchastiye: CHERNYAVSKAYA, Ye.D.; SHAPKINA, M.M.

Spectrophotometric analysis of thioindigo dyes. Org. poluprod. i kras. no.2:215-222 '61. (MIRA 14:11)
(Thioindigo) (Spectrophotometry)

DOKUNIKHIN, N.S.; GERASIMENKO, Yu.Ye.

Thioindigoid dyes. Part 7: Thioindigoid dyes with methylsulfonyl groups. Zhur.ob.khim. 31 no.6:1927-1931 Je '61. (MIRA 14:6)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley imeni K.Ye.Voroshilova.
(Dyes and Dyeing) (Thioindigo)

DOKUNIKHIN, N.S.; GERASIMENKO, Yu.Ye.

Thioindigoid dyes. Part 8: Ethoxymethylsulfonyl substituted thioindigo. Zhur.ob.khim. 31 no.6:1931-1934 Je '61. (MIRA 14:6)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley imeni K.Ye.Voroshilova.
(Thioindigo)

GERASIMENKO, Yu.Ye.; SHEYN, S.M.; BAKULINA, G.G.; CHEREPIVSKAYA, A.P.; SEMENYUK, G.V.; YAGUPOL'SKIY, L.M.

Thioindigoid dyes. Part 9: Thioindigoid dyes containing fluorine. Zhur.ob.khim. 32 no.6:1870-1874 Je '62. (MIRA 15:6)
(Thioindigo)

GERASIMENKO, Yu.Ye.; BAKULINA, G.G.; KARPOV, V.V.

Asymmetric indigoid dyes. Part 1: Unusual transformation of 2-thionaphthene-3'-(N-carboxymethyl') indolindigo. Zhur. ob. khim. 33 no.6:1988-1991 Je '63. (MIRA 16:7)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley, filial v g. Rubezhnoye.
(Benzothiophene) (Indole) (Indigo)

GERASIMENKO, Yu. Ye.; BAKULINA, G. G.

Asymmetrical indigoid dyes. Part 2: Mechanism underlying the transformations of 2-thionaphthene-3'-(N-carboxymethyl)indolindigo. Zhur. ob. khim. 34 no.6:2015-2019 Je '64. (MIRA 17:7)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley, filial v gorode Rubezhnoye.

SOV/84-58-7-5/46

AUTHOR: Gerasimets, A., Propagandist, Political Department of the East Siberian Administration of the GVF (Irkutsk)

TITLE: Over the Siberian Expanse (Nad prostorami Sibiri)

PERIODICAL: Grazhdanskaya aviatsiya, 1958, Nr 7, pp 4-5 (USSR)

ABSTRACT: The author renders a historical review of the development of the means of transportation in East Siberia, particularly aviation. The article was written for Aviation Day. It mentions a number of prominent airmen and technicians whose contribution to the present level of development is considerable. Some statistical data of local significance are included.

Card 1/1 Politotdel Vostochnosibirskogo upravleniya Grazhdanskogo vozdushnogo flota.

GERASIMETS, M.T.

Surgical anatomy of the superior alveolar nerves. Stomatologiia 38 no.4:39-42 Jl-Ag '59. (MIRA 12:12)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - prof. T.V. Zolotareva) Khar'kovskogo meditsinskogo stomatologicheskogo instituta (dir. - dotsent G.S. Voronyanskiy).
(NERVES, DENTAL)

GERASIMETS, M. T. Cand Med Sci -- "Surgical anatomy of the maxillary nerve."
Khar'kov, 1961 (Khar'kov State Med Inst). (KL, 4-61, 208)

GERASIMETS, N.V., aspirant

Disorders of liver function in bronchial asthma. Kaz. med. zhur. no.1:36-38 Ja-F '62. (MIRA 15:3)

1. Gospital'naya terapevticheskaya klinika (zav. - prof. A.A. Kovalevskiy) Tomskogo meditsinskogo instituta.
(LIVER)
(ASTHMA)

VASIL'YEV, A.A.; GERASIMCHUK, T.V.

Possibility of producing novolak resins from anisole and formaldehyde and sulfonated ion exchangers based on them. Zhur. prikl. khim. 37 no.12:2733-2738 D '64.
(MIRA 18:3)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

SUBBOTIN, A.; GERASIMOV, A.

High precision. Mast.prom.i khud. promys. 3 no.1:22 Ja '63. (MIRA 16:2)

1. Sotrudniki Nauchno-issledovatel'skogo tekhnokhimicheskogo instituta.
(Hardness) (Measuring instruments)

GERASIMOV, A., vtoroy mekhanik

Causes for the failure of bearings on R8DV136 diesel-generators.
Mor. flot 23 no.10:30-31 O '63. (MIRA 16:10)

1. Teplokhod "Suntar."
(Marine diesel engines) (Electric generators)

BLAGOVESHCHENKIY, S., doktor tekhn.nauk, prof.; VOZNESENSKIY, A., kand.tekhn. nauk; VOYTKUNSKIY, Ya., kand.tekhn.nauk, dotsent; GERASIMOV, A., kand.tekhn.nauk, dotsent; GRECHIN, M., kand.tekhn.nauk; DORIN, V., kand.tekhn.nauk; DOROGOSTAYSKIY, D., doktor tekhn.nauk; KOSOUROV, K., doktor tekhn.nauk, prof.; KRIVTSOV, Yu., kand.tekhn.nauk; MURU, N., kand.tekhn.nauk, dotsent; SEMENOV-TYAN-SHANSKIY, V., doktor tekhn. nauk, prof.; SOLOV'YEV, V., kand.tekhn.nauk, dotsent; TOPORKOV, I., inzh.; FIRSOV, G., doktor tekhn.nauk, prof.; FISHER, A., inzh.; KHRUSTIN, V., kand.tekhn.nauk, dotsent; EYDEL'MAN, D., inzh.

Concerning P.Khokhlov's article "Determining the center of gravity of a vessel during an inclining experiment with trim difference." Mor. flot 23 no.5:33-34 '63. (MIRA 16:9)
(Stability of ships)

GERASIMOV, A. inzh.

Cylindrical slide rule. Mor. flot 20 no.9:20 S '60. (MIRA 13:9)

1. Baltiyskoye parokhodstva.
(Navigation) (Slide rule)

GERASIMOV, A., inzh.-teplotekhnik

Changes in the design of steam inlet pipes. Mor.flot 19 no.3:
28-29 Mr '59. (MIRA 12:4)

1. Baltiyskoye parokhodstvo.
(Boilers, Marine--Equipment and supplies)

GERASIMOV, A., inzh.

Operation of "Kolomna"-type ships. Mor.flot 19 no.8:33-35 Ag '59.
(MIRA 12:11)

1. Baltiyskoye parokhodstvo.
(Boilers, Marine)

GERASIMOV, A., inzh.-teplotekhnik

Device for making elliptical diagrams of steam distribution.
Mor.flot 19 no.11:37 N '59. (MIRA 13:3)

1. Baltiyskoye parokhodstvo.
(Marine engineering)

GERASIMOV, A.

On an unknown field. Kryl.rod.12 no.3:16 Mr '61.
(MIRA 14:6)
(Helicopters—Piloting)

GERASIMOV, A., kapitan 3-go ranga

Veterans. Sov. voin 43 no.22:8 N '61. (MIRA 15:2)
(World War, 1939-1945--Naval operations) (Naval museums)

NOVOZHININ, V.; KHALIN, A.; SAMOYLOV, Ye., narodnyy artist RSFSR; GERASIMOV, Aleksandr, narodnyy khudozhnik SSSR; TYUMMEL', Gerbert, novator, Gerdy Truda; KRAL, Eduard

Victory of Lenin's ideas. Sov. profsoiuzy 17 no.16:8-9 Ag '61. (MIRA 14:7)

1. Predsedatel' tsekhovogo komiteta profsoyuza motornogo tsekha No.3 Gor'kovskogo avtozavoda (for Novozhinin). 2. Predsedatel' rabochkoma sveklosovkhoza "Rubtsovskiy", Altayskogo kraya (for Khalin). 3. Avtomobil'nyy zavod "Barkas", g. Karlmarksshtadt (for Tyummel). 4. Rukovoditel' brigady sotsialisticheskogo truda imeni Yuriya Gagarina, zavod ChKD "Stalingrad," Praga (for Kral). (Communism) (Russia--Economic policy) (Astronautics)

SUBBOTIN, A. (Moskva); GERASIMOV, A., nauchnyy sotrudnik (Moskva)

Needed by the national economy. Mest.prom.i khud.promys. 3 no.4:25 Ap '62. (MIRA 15:5)

1. Zaveduyushchiy laboratoriyey lakov i krasok Nauchno-issledovatel'skogo tekhnokhimicheskogo instituta (for Subbotin). 2. Nauchno-issledovatel'skiy tekhnokhimicheskiy institut (for Gerasimov).

(Manganese) (Industrial wastes)

GERASIMOV, A.

How should supplies nevertheless be improved? Grazhd. av. 22 no.5:26 My '65. (MIRA 18:7)

1. Nachal'nik otdela material'no-tekhnicheskogo snabzheniya Vostochno-Sibirskogo upravleniya, Irkutsk.

GERASIMOV, A.A.

The KUP machine for uprooting, removing, and loading of tree stumps. Biul.tekh.-ekon.inform. no.6:6-7 '60. (MIRA 13:8)
(Clearing of land)

GERASIMOV, A.A.; KOZHEVNIKOV, V.A.

Electrical ergograph with the mechanism for summation. Fiziol. zhur. 42 no.4:434-437 Ap '54. (MLRA 9:7)

1. Laboratoriya ekologicheskoy fiziologii i laboratoriya fiziologii sluhovogo analyzatora Instituta fiziologii imeni I.P.Pavlova AN SSSR, Leningrad
(PHYSIOLOGY, apparatus and instruments, ergograph with mechanism for summation (Rus))

84589

9,4340 (1143,1160)
24.7700 (1043 only)

S/181/60/002/010/011/051
B019/B070

AUTHORS: Lyashenko, V. I., Chernaya, N. S., and Gerasimov, A. B.

TITLE: A Study of the Energy Distribution of the Surface Electron States on a Purified Germanium Surface and in the Case of Adsorption of Oxygen

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 10, pp. 2421-2430

TEXT: The method of purifying the germanium surface is described in the first section, the process used being that proposed by Farnsworth. The block scheme of the vacuum arrangement and the experimental tube are shown in Figs. 1 and 2, respectively. The samples were p-type germanium with a resistivity of 40 ohm.cm and a volume lifetime of 300 microseconds. The surface purified lay in the (111) plane. The surface levels were determined by a method described in Refs. 4 and 14, which depends on the comparison of the theoretical and experimental dependences of the additional conduction on the surface charge. In Figs. 4,5, and 6 are shown, respectively, the volt - ampere characteristic of the samples under different conditions of the surface, the additional conduction as a function of the

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A Study of the Energy Distribution of the Surface Electron States on a Purified Germanium Surface and in the Case of Adsorption of Oxygen

S/181/60/002/010/011/051
B019/B070

charge on the surface, and the charge in the surface states as a function of the surface potential. From the results it is concluded that on pure germanium surfaces, energy states of large density with $E_t = -11kT$ are Tamm's states; that these levels are not formed by the adsorption of the residual gas; that it is improbable that the high density is due to the atoms which diffuse to the surface during the final annealing in the process of purification and which are difficult to desorb. The structure on the surface of germanium is found to deviate from the regular germanium structure; levels lying at $E_t = -11kT$ were not observed for true surfaces. The model of Tamm's levels agrees completely with the data on oxygen adsorption. Oxygen lowers the density of the surface states. It is shown that levels with the parameters $E_t = -2,5kT$ and $N_t \simeq 10^{11}$ cm^{-2} are due to oxygen which saturates the free covalent bonds of the surface atoms of germanium. These "oxygen" levels could not be observed on true surfaces.

N. N. Kvasnitskaya and K. K. Shtan'ko are thanked for breeding the crystal.
There are 6 figures, 1 table, and 21 references: 5 Soviet, 14 US, and 1 Japanese.

Card 2/3

84589

A Study of the Energy Distribution of the Surface Electron States on a Purified Germanium Surface and in the Case of Adsorption of Oxygen

S/181/60/002/010/011/051
B019/B070

ASSOCIATION: Institut fiziki AN USSR Kiyev (Institute of Physics of the AS UkrSSR, Kiyev)

SUBMITTED: March 29, 1960

4

Card 3/3

40746

S/120/62/000/004/012/047
E039/E420

24 1730

AUTHORS: Boyko, S.N., Barabash, L.Z., Gerasimov, A.B., Dmitriyev, S.P., Zheravov, V.G., Royfe, I.M., Stekol'nikov, B.A.

TITLE: Voltage supplies of the deflection and beam suppression plates of the ion-beam-input system of the proton synchrotron chamber

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 76-80

TEXT: For the accurate injection of the beam into the acceleration chamber the correct magnitude and sequence of voltages must be applied to the three pairs of deflector and suppressor plates or condensers described in the previous abstract (70-75, of the present journal). The form and values of the voltage on the deflector and suppressor plates is shown in Fig.1. The voltage to the plates is supplied from an H.T. unit of ± 42 kV stable to better than ± 0.2% per day. As the beam orbit passes between the third pair of deflector plates the residual voltage on the plates after injection must be reduced to less than ± 0.3 kV after 1.5 μ sec from the end of the voltage pulse. A block diagram of the H.T. unit is given, the switching being

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accomplished by means of thyratrons, the trigger voltage of which determines the residual voltage. The latter is reduced further by means of a compensating circuit to not more than 100 V during the 1.5 μ sec after the end of the voltage pulse and decays in a period of 5 to 7 μ sec. The value of the residual voltage on the suppressor plates must not exceed 150 V for a suppression potential of 30 kV. Block diagrams of the circuits are given. There are 7 figures.

ASSOCIATIONS: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE)
Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury GKAE (Scientific Research Institute for Electrophysical Apparatus GKAE)

SUBMITTED: March 16, 1962

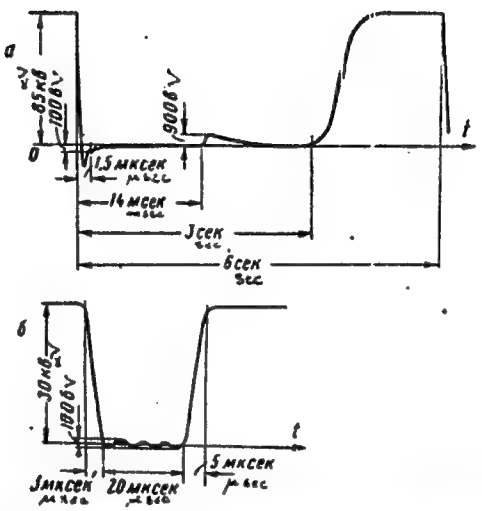
S/120/62/000/004/012/047
E039/E420

Voltage supplies of the deflection ...

Fig.1.

а - shape of the voltage on the deflector plates,

б - shape of the voltage on the suppressor plates.



Card 3/3

GERASIMOV, A.B.; RYVKIN, S.M.; YAROSHETSKIY, I.D.

Impurity photoconductivity in germanium irradiated by fast electrons.
Fiz. tver. tela 6 no.3:695-705 Mr '64. (MIRA 17:4)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.

ABSTRACT: Preliminary results are presented on low-temperature irradiation of n-type Ge with $N_d = 2 \times 10^{14}$--2×10^{15} cm^{-3}, including samples without and with dislocations (dislocation density 10^7--10^8 cm^{-2}), and also of p-type Ge with $N_a = 8 \times 10^{14}$--4×10^{15} cm^{-3}. The samples were irradiated with 3.5-Mev electrons at T = 77K (the samples were kept in liquid nitrogen). The irradiated samples were kept in the nitrogen for several days until their resistance sta-

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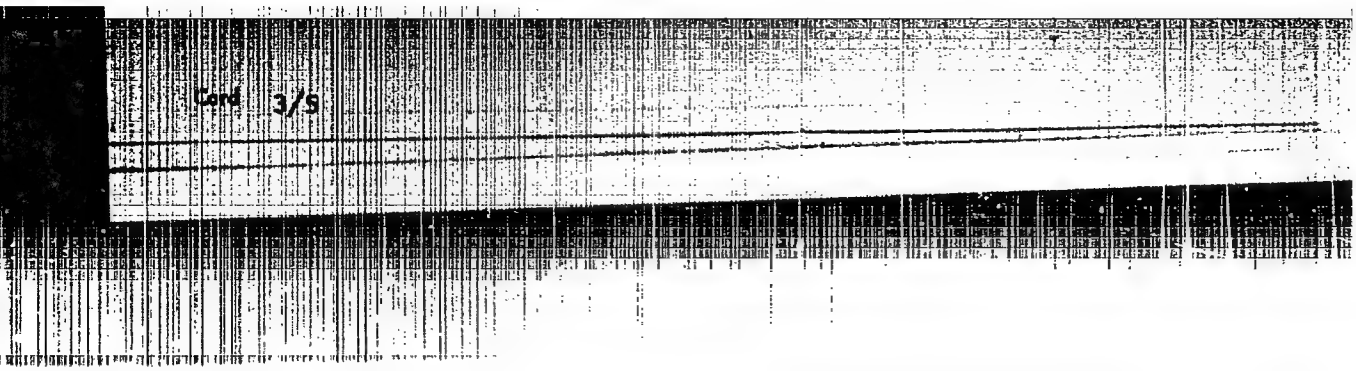
bilized, and then subjected to isochronous annealing to room temperature with an interval of 20°–30° between annealing points and with an annealing time 15 minutes. After each annealing, measurements were made at 77K of the Hall coefficient, the conductivity, and of the spectral characteristic of the impurity photoconductivity. Al[illegible]

L 12027-65
ACCESSION NR: AP4046651

of low-temperature irradiation and irradiation at room temperature of samples with and without dislocations. All the results indicate



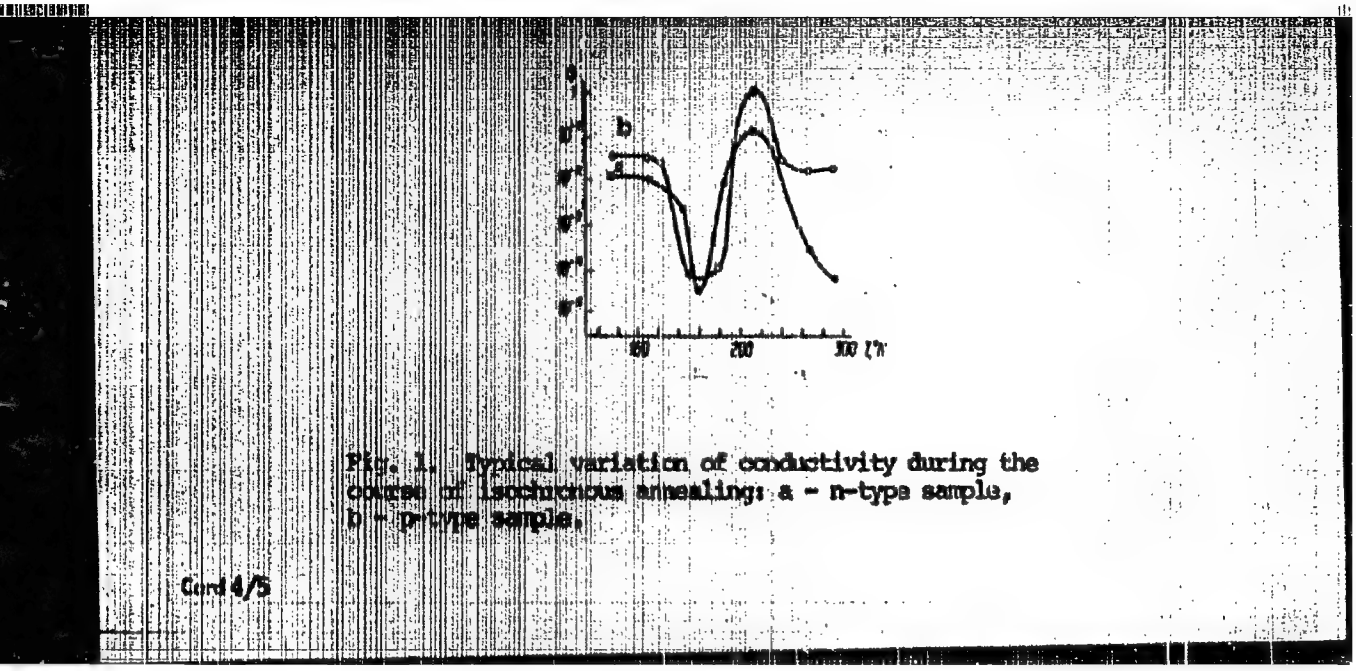


Fig. 1. Typical variation of conductivity during the course of isochronous annealing: a - n-type sample, b - p-type sample.

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ENCLOSURE: 02

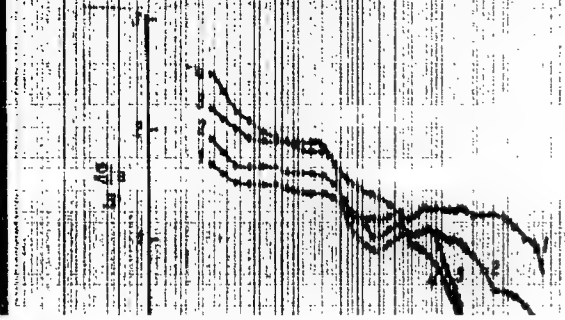
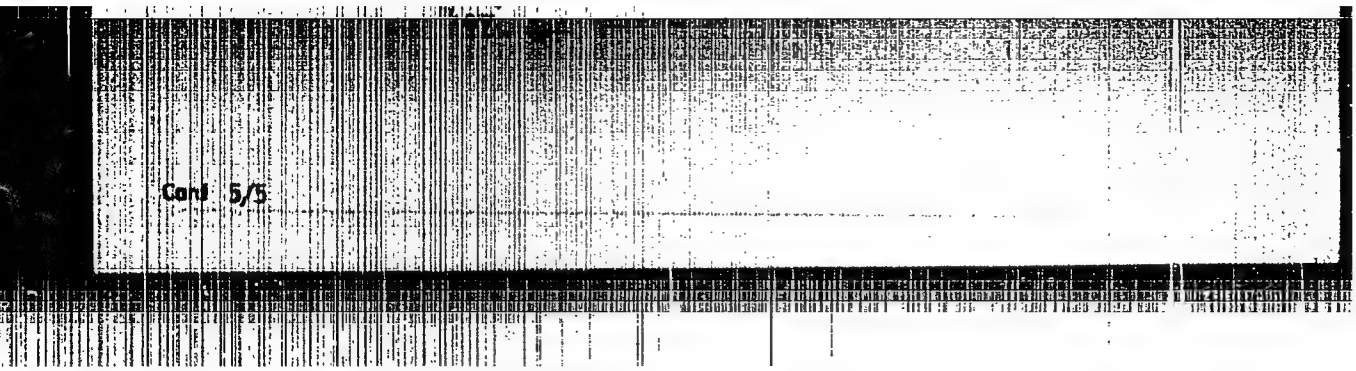


Fig. 2. Variation of the form of the spectral characteristics during the course of isochronous annealing for an n-type sample.

1 - Prior to annealing, 2 - after annealing at 190K, 3 - after annealing at 270K, 4 - after annealing at 295K.



L 09899-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) AT/JD

ACC NR: AP6033561 SOURCE CODE: UR/0181/66/008/010/2994/2998

AUTHOR: Gerasimov, A. B.; Konovalenko, B. M.; Kotina, I. M.; Umarova, Kh. F.

ORG: Physicotechnical Institute imeni A. F. Ioffe AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut) AN SSSR

TITLE: Kinetics of bipolar impurity photoconductivity of silicon with radiation defects

SOURCE: Fizika tverdogo tela, v. 8, no. 10, 1966, 2994-2998

TOPIC TAGS: photoconductivity, bipolar photoconductivity, radiation, radiation defect, conductivity

ABSTRACT: Silicon samples with radiation defects at T = 77K were observed to be characterized by distinctive kinetics in the increase of their impurity photoconductivity. An explanation is offered for this phenomenon, which is shown to be related to the bipolarity of impurity excitation, and an approximate computation is made of the kinetics of inverse overcharge for a case of low level excitation. The

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ACC NR: AP6033561

cross-section of hole capture at the radiation defect level $E_c - 0.40$ ev is determined. Orig. art. has: 7 formulas and 5 figures. [Authors' abstract]

SUB CODE: 20/ SUBM DATE: 28Mar66/ ORIG REF: 004/ OTH REF: 002/

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L 08959-67

ACC NR: AP6019724 SOURCE CODE: UR/0108/66/021/006/0055/0061

40

AUTHOR: Gerasimov, B. M. (Active member of the society)

ORG: Scientific and Technical Society of Radio Engineering and Electrocommunication im. A. S. Popov (Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi)

TITLE: Synchronizing the relaxation oscillator by a regular pulse sequence

SOURCE: Radiotekhnika, v. 21, no. 6, 1966, 55-61

TOPIC TAGS: relaxation oscillator, pulse signal, pulse signal reception

ABSTRACT: The operation of a synchronized relaxation oscillator which is used for gating a pulse-signal receiver is theoretically considered. On the basis of iteration relations, which connect the pulse-signal arrival instant with the oscillator gating-pulse time, possible synchronizing conditions of the oscillator

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ACC NR: AP6019724

and durations of its pulses are determined; also, the time which elapses between the signal arrival and establishment of the corresponding synchronization is evaluated. A formula is derived for pulling in the oscillator by a regular pulse sequence that has a specified pulse repetition rate. The pull-in band depends on synchronization conditions and on the fill factor of the gating-pulse sequence produced by the oscillator under slave (search) conditions. Relations among synchronization parameters, synchro-pulse repetition rate, and fill factor are shown. The average pull-in time decreases when r and f increase; r is the fill factor, f is the ratio of pulse-signal repetition rate to oscillator gating-pulse rate. Orig. art. has: 3 figures and 25 formulas.

SUB CODE: 09 / SUBM DATE: 24Apr65 / ORIG REF: 001

ACC NR: AP6036962 (A,N) SOURCE CODE: UR/0181/66/008/011/3226/3231

AUTHOR: Gerasimov, A. B.; Konovalenko, B. M.; Ryvkin, S. M.; Umarova, Kh. F.; Yaroshetskiy, I. D.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Photoelectret state in silicon with radiation defects

SOURCE: Fizika tverdogo tela, v. 8, no. 11, 1966, 3226-3231

TOPIC TAGS: photoelectret, crystalline silicon, radiation effect

ABSTRACT: The photoelectret state (PS) and the dependence of its properties on the concentration of free carriers and the concentration of local levels in the forbidden band were studied on two groups of n- and p-type silicon samples with different positions of the Fermi level after irradiation with fast electrons (which produced radiation defects). The dependence of dark polarization on the time of application of the polarizing voltage and its magnitude was measured, this being one of the chief characteristics of PS. Differences in the PS of the two groups of samples were also manifested in the persistence of polarization. The spectral selectivity of the PS was also determined. Analysis of the spectral curves showed characteristics corresponding to certain local levels of radiation defects; the curves break off abruptly in the shortwave range on passing to bipolar excitation, starting at quantum energies at

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which the formation of minority carriers is possible. The results of the study of PS during bipolar excitation are interpreted in the light of the substantial role played by optical charge exchange between impurity centers in the observed effect. Authors take this opportunity to thank I. M. Kotina for her assistance. Orig. art. has: 7 figures.

SUB CODE: 20/ SUBM DATE: 07Apr66/ ORIG REF: 009/ OTH REF: 001

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GERASIMOV, A. D.: Master Tech Sci (diss) -- "Investigation of the inter-phase stress at the boundary between fused aluminum and fused electrolyte in the electrolytic production and electrolytic refining of aluminum". Moscow, 1958. 13 pp (Min Higher Educ USSR, Moscow Inst of Nonferrous Metals and Gold im M. I. Kalinin, Chair of the Metallurgy of Light Metals), 150 copies (KL, No 1, 1959, 119)

SOV/149-58-5-6/18

AUTHORS: Gerasimov, A.D. and Belyayev, A.I.

TITLE: Investigation of the Interfacial Tension at the Metal-electrolyte Boundary During Electrolytic Extraction and Refining of Aluminium (Issledovaniye mezhfaznogo natyazheniya na granitse metalla s elektrolitom pri elektroliticheskom poluchenii i rafinirovanii alyuminiya)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, 1958, Nr 5, pp 50 - 61 (USSR)

ABSTRACT: The interfacial tension, σ_M, at the boundary of two immiscible phases is a measure of the difference of their surface energies and in the case of two mutually soluble phases it determines the equilibrium conditions. Its practical importance lies in the fact that it is one of the factors which determine the efficiency (metal yield/power consumption) of electrolysis of fused salts. Scarcity of reliable data on the value of σ_M in the system aluminium/alkali fluorides-alumina, prompted the present authors to re-investigate this problem with the view of determining the optimum composition of the electrolyte in the extraction and refining of aluminium.

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Investigation of the Interfacial Tension at the Metal-electrolyte Boundary During Electrolytic Extraction and Refining of Aluminium

Most of the experiments were carried out by the method of maximum pressure in the metal drop adapted by the authors for fluoride melts, with the aid of apparatus illustrated in Figure 1. The fact that the values of σ_M obtained by this method for several metal/fused-salt systems were almost identical with those obtained by Karpachev at al. (Ref 7) proved the suitability of the method for the present purpose. For the determination of the electrocapillary curves (Figure 10), the inverted method of maximum pressure as applied by Romanov (Ref 4) was used. The apparatus is shown schematically in Figure 2. X-ray photography was also used but owing to the small difference between the coefficients of permeability of the metal and electrolyte, the results obtained by this method were not very accurate and could be used only to indicate the order of magnitude of σ_M. The results of the experiments in which the effect of various factors on σ_M was determined are reproduced graphically. Owing to the